Special Issue

Innovative Technologies and Materials for the Production of Mechanical, Thermal and Corrosion Wear-Resistant Surface Layers and Coatings

Message from the Guest Editors

Surface deterioration is a very real problem in many industries. During the wear process, the surface layer of material is degraded and damaged by mechanical, high temperature, or chemical reaction between the worn element and other elements or aggressive environments. Surfacing, coating, cladding, thermal spraying, galvanization processes with specialized welding filler materials are used to replace worn metal with metal that can provide more satisfactory wear resistance than the original. It is wise to consider a combination of factors that create the wear problem to make a decision regarding selection of surfacing, plating, spraying, or galvanizing alloy. Wear prediction proves to be difficult due not only to the dependence on material and design properties but also on difficulties in the quantification and control of tribological systems during the lifetime. The purpose of this Special Issue is to present the latest developments in the field of research on innovative technologies and materials to produce surface layers and coatings resistant to mechanical wear, thermal wear, and corrosion.

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Deadline for manuscript submissions

closed (20 December 2022)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/73323

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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